

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
4 August 2005 (04.08.2005)

PCT

(10) International Publication Number
WO 2005/070006 A2

(51) International Patent Classification: Not classified (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number: PCT/US2005/002257

(22) International Filing Date: 24 January 2005 (24.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 60/537,918 22 January 2004 (22.01.2004) US

(71) Applicant (for all designated States except US): NITROMED, INC. [US/US]; 125 Spring Street, Lexington, MA 01730 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): ELLIS, James, L. [GB/US]; 21 Pearl Road, Boxford, MA 01921 (US).

(74) Agents: GRIEFF, Edward, D. et al.; Wilmer Cutler Pickering Hale and Dorr LLP, 1455 Pennsylvania Avenue NW, Washington, DC 20004 (US).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/070006 A2

(54) Title: NITROSATED AND/OR NITROSYLATED COMPOUNDS, COMPOSITIONS AND METHODS OF USE

(57) **Abstract:** The invention describes novel nitrosated and/or nitrosylated compounds of the invention and pharmaceutically acceptable salts thereof, and novel compositions comprising at least one nitrosated and/or nitrosylated compound of the invention, and, optionally, at least one nitric oxide donor and/or at least one therapeutic agent. The invention also provides novel compositions comprising at least one compound of the invention, and at least one nitric oxide donor and/or at least one therapeutic agent. The invention also provides novel kits comprising at least one compound of the invention, that is optionally nitrosated and/or nitrosylated, and, optionally, at least one nitric oxide donor and/or at least one therapeutic agent. The invention also provides methods for (a) treating bacterial infections; (b) treating viral infections; (c) treating fungal infections; and (d) treating lesions. The nitrosated and/or nitrosylated compounds of the invention are preferably nitrosated and/or nitrosylated antimicrobial compounds, nitrosated and/or nitrosylated adenosine antagonists, nitrosated and/or nitrosylated LTB4 antagonists, nitrosated and/or nitrosylated mucoregulators and nitrosated and/or nitrosylated purine agonists. The methods of the invention are preferably for the treatment of bacterial infections associated with pulmonary diseases such as cystic fibrosis.